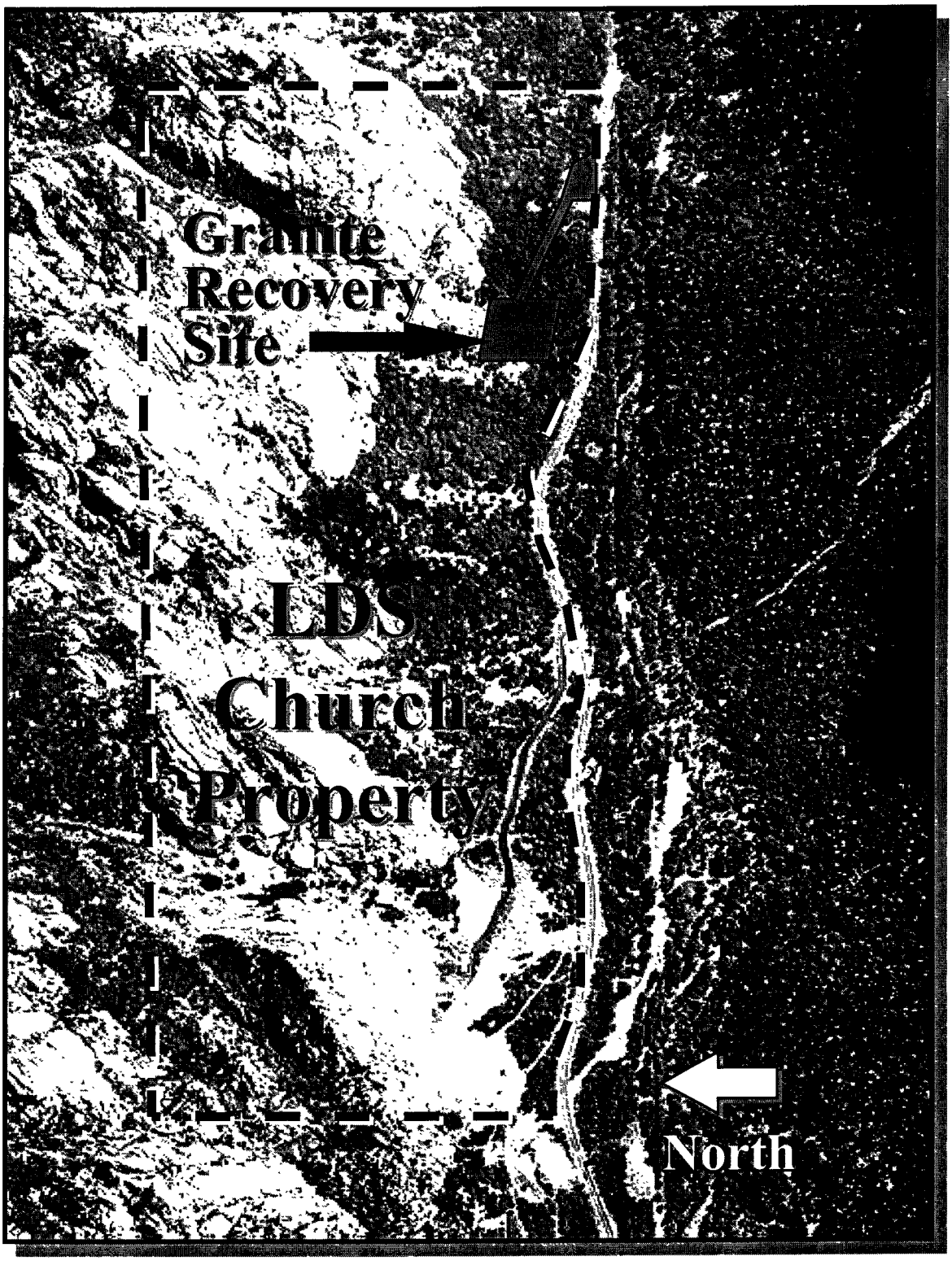

Granite Recovery Site

Little Cottonwood Canyon

Kerr RVT

PL-97-2265

Engineering Geology & Geologic Hazards Reduction Program
RECOMMENDATIONS for PL-97-2265 - Foothill and Canyons Overlay Zone
Conditional Use: Mineral Extraction (dimension stone)
Applicant: L.D.S. Church
Site Address: 5047 East Little Cottonwood Canyon (9800 South)
Date: March 10, 1998

INTRODUCTION

As part of your application, the Development Services Division has asked me to provide recommendations for approval or disapproval based on the geologic site conditions at your proposed development. This is a revised recommendation and supercedes all previous.

AVALANCHE PATH

This parcel is not located within an Avalanche Path Special Study Area. No special studies are required to address this hazard.

SURFACE FAULT RUPTURE

This parcel is not located within a Surface Fault Rupture Special Study Area. No special studies are required to address this hazard.

LIQUEFACTION

This parcel is located outside the area mapped for liquefaction potential. However, given the nature of the sediments and probable depth to ground water on the slopes in canyon areas this site is likely to have a "very low" potential for liquefaction. No special studies are required to address this hazard.

FOOTHILL AND CANYONS OVERLAY ZONE

A geotechnical report has been received from Applied Geotechnical Engineering Consultants (AGEC) which addresses the geologic hazards at the site as required by Salt Lake County ordinance. The AGEC report provides specific recommendations for slope stability considerations and drainage that must be followed during stone extraction activities. The report is signed and stamped by Douglas R. Hawkes, P.E.

RECOMMENDATIONS

I recommend approval.

Craig V Nelson, C.E.G. - County Geologist

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RECEIVED
MAR 13 1998
TEMPLES & SPECIAL PROJECTS
DIVISION

RECEIVED
MAR 20 1998
DIV. OF OIL, GAS & MINING

SALT LAKE COUNTY

Salt Lake County Public Works Department

Planning Division

Randy Horiuchi
Salt Lake County Commissioner

Lonnie L. Johnson
Director of Public Works

Calvin K. Schneller, AICP
Division Director

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Geologic Hazards Reduction Program

Craig V Nelson, CEG
County Geologist
cnelson@pw.co.slc.ut..us

THE CHURCH OF
JESUS CHRIST
OF LATTER-DAY SAINTS

TEMPLES AND SPECIAL PROJECTS DIVISION
New Assembly Building Project
Joseph Smith Memorial Building
Eighth Floor
15 East South Temple Street
Salt Lake City, Utah 84150

March 16, 1998

Susan Crook, Planner
Development Services/Planning
Salt Lake County
2001 South State St. N3600
Salt Lake City, Utah 84190-4050

Re: **Application PL-97-2265:**
Applicants response to Request for Recommendation
Comments by Grading Engineer, Ed Belliston March 10, 1998

Please find the following response (listed in same order as the comments) for the above referenced application:

1. No response required.

2. No response required.

3. See revised grading on Site Plan Drawing.

4. See revised widths for upper (14') path on Site Plan Drawing.

5. See revised widths for lower (16') path on Site Plan Drawing.

6. Smaller boulders and cubic slabs will be carried by a rock loader from the recovery area to the loading area. The Geotechnical Report prepared by AGEC, Inc. for this application, identifies the natural soils suitable for support of equipment traffic. A granular surface coarse will be provided where necessary to maintain a suitable path surface and access.

7. For clarification the second paragraph on page two of the Application Request shall read "The proposed access paths and equipment staging area will provide temporary access to the stone. All graded, compacted or excavated areas within the boulder field, access paths, and equipment staging area will be stabilized and restored when the work is

completed. This will be accomplished by ripping compacted areas and regrading all disturbed ground, to the extent possible, back to natural slopes. The existing graded parking area along the highway will remain. The existing parking area will have remaining boulders placed around the perimeter to maintain slope stability and separation from the highway for safety.

Like re-vegetation will be provided for all areas where existing vegetation is removed or disturbed. Re-vegetation will consist of providing a native seed mix in disturbed soil to prevent soil erosion and planting like scrub oak and bigtooth maple trees.

8. See revised grading on Site Plan Drawing.
Grading will maintain 1:1 for temporary cuts and 1.5:1 for temporary fill. Excavation will be held to the minimum level required to accomplish the work.

9. The grading for the equipment staging area is temporary. Section 19.72.030.C.3.b allows original grade to be raised or lowered more than six (6) feet with terracing. The equipment staging area will be re-graded as noted in #7 above.

10. It is the recommendation of the geotechnical engineer and the intent of the applicant, to have the work process observed and monitored to maintain short and long term stability of the work area. The geotechnical engineer/geologist will observe the work process. See the attached letter from AGEC, Inc. dated March 13, 1998 for additional definition.

11. We understand that a grading permit will be issued for the excavation activity and that the County will provide grading inspections. We also understand that the grading permit and inspector will allow for reasonable variations in the proposed grading plan, once work commences and conditions are better known, to minimize the required areas of disturbance.

12. We have budgeted for the expected restorative measures as described in the application as part of the project. We expect to finalize the actual cost based upon the conditions required to accomplish the work. The Church has and will commit sufficient resources to complete the project fully as described.

We trust that this information is sufficient to satisfy the comments received.

Thank you for your assistance and input to the requirements of our application.

Please let me know directly if there are any further concerns from the County.

Sincerely,

Kerry B. Nielsen, A.I.A
Project Architect
KBN/kbn

c: File A-1
slcosc01.LTR PL-97-2265 grading comments response.frm

Applied Geotechnical Engineering Consultants, Inc.

March 18, 1998

The Church of Jesus Christ of Latter Day Saints
15 East South Temple
Joseph Smith Building 8th Floor
Salt Lake City, Utah 84150

Attention: Kerry Nielsen

Subject: Geotechnical Consultation
Mineral Extraction
Little Cottonwood Canyon
Project No. 983119

Gentlemen:

Applied Geotechnical Engineering Consultants, Inc. (AGEC), was requested to provide additional consultation with regards to the mineral extraction on a church property located approximately 1 to 1.5 miles up Little Cottonwood Canyon in Salt Lake County, Utah.

AGEC previously conducted a geotechnical investigation for the mineral extraction and presented our findings and recommendations in a report dated March 3, 1998, under project number 983119.

We understand that, Salt Lake County has requested additional information with regards to the geotechnical aspects of the site and the mineral extraction process. Included in the requests are the following:

1. Road Cut and Fill Stability

   Temporary cut slopes 1:1 (horizontal to vertical) and fill slopes of 1.5:1 (horizontal to vertical) are recommended in the report. These slopes will be suitable for the proposed temporary roadways.

2. Rock Fall

   The geotechnical report indicates that the site has a rock fall hazard that could be mitigated for short term recovery operations by identifying rocks representing a hazard to the recovery operation. The risk of each rock posing a hazard to the work could be evaluated and a determination made as to what steps could be taken, if any, to mitigate this hazard.

After consultation with Church representatives, they intend to have a representative of the geotechnical engineer meet with the contractor prior to the recovery process to review the geotechnical sensitive issues and to verify that the recovery approach will not adversely effect the geotechnical aspects of the site. Our observation will continue on a periodic basis during the process, when needed, depending on the process proposed by the contractor and the particular conditions encountered.

We believe that the extraction process will not adversely effect the stability of the site if the recommendations are followed. We also believe that there is no adverse impact over the long term from the extraction process with regards to the rock fall hazard at the site.

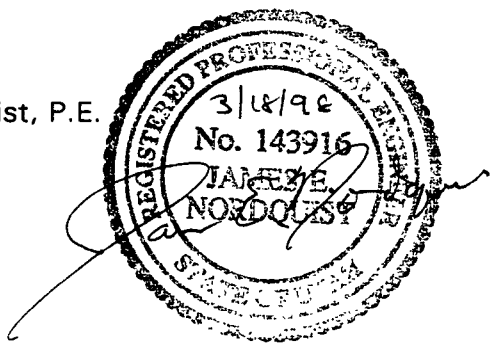
3. Project Conclusion

Prior to the conclusion of the project, the site will be observed by a representative of the geotechnical engineer and an evaluation conducted to verify that the mineral extraction process has not adversely impacted the geologic conditions at the site. Recommendations would be provided to mitigate any potential hazard, if needed.

If you have any questions or if we can be of further service, please call.

Sincerely,

APPLIED GEOTECHNICAL ENGINEERING CONSULTANTS, INC.



James Nordquist, P.E.

JEN/js